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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,285	12/05/2003	Jeffrey Dean Lindsay	KCC-15,484.1	1600

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EXAMINER	
BROWN, JAYME L	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/729,285	LINDSAY ET AL.	
	Examiner	Art Unit	
	Jayme L. Brown	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/5/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 12/5/03 has been considered by the examiner. Note that U.S. Patent 6,356,525 appears to be incorrectly listed in the IDS as it is not to Hamajima et al., but to Ikedo et al., and it appears to be unrelated to absorbent articles.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it states that the binder material can be a solid. It is unclear how to deform the absorbent web against the molding surface before the binder material solidifies, if the binder material is already solid. What happens to the binder material when it is activated? What would happen to a liquid binder material when it is activated? It is recommended that the steps in this claim be clarified.

Regarding claims 9 (line 1), 10 (line 1), 11 (line 10), and 13 (line 2), it is recommended that - - absorbent - - be inserted before "web" in order to keep consistent with the rest of the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 6-7, and 9-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pike et al. (EP 0665315) in view of Alper et al. (U.S. Patent 6,024,822).

Regarding claim 1, Pike et al. teaches a method of preparing an absorbent article (Page 8, lines 20-23), the method comprising: providing an absorbent web comprising fibers and binder material selected from at least one of a solid, an emulsion, a slurry, a dispersion, and a liquid, and deforming the absorbent web against a molding surface before the binder material becomes solidified to impart a three-dimensional shape to the absorbent web (Page 2, lines 27-52; Page 3, lines 52-57, Page 6, lines 14-20).

Pike et al. is silent toward the fibers being cellulosic fibers, applying radiofrequency energy to the binder material, reducing application of the radiofrequency energy to the binder material, disposing the absorbent web above a backsheet, disposing a topsheet above the absorbent web, and attaching the topsheet to the backsheet.

Alper et al. is directed to a method of utilizing microwave energy in the manufacture of disposable nonwoven absorbent articles where hot melt adhesives are

replaced with microwave sensitive adhesives. Alper et al. teaches that an absorbent core (web) can be made out cellulosic fibers that are mixed with a microwave activatable adhesive (binder) that is in the form of powder, grains, flakes, fibers, etc. Microwaves directed at the core will be absorbed by the adhesive, which will allow bonding of the absorbent material throughout the core. The absorbent core (web) is disposed above a backsheet, and a topsheet is disposed above the absorbent core (web) with the backsheet being joined to the topsheet (Abstract; Column 2, lines 29-57; Column 5, lines 34-47 and 57-60).

One skilled in the art would have readily recognized using cellulosic fibers in the absorbent web and having the absorbent web disposed between a topsheet and a backsheet since it is known and conventional in the art. One skilled in the art would have also readily appreciated using a binder material that is activated by radiofrequency energy (microwaves), since they can form stronger bonds and a broader range of adhesives can be utilized since there isn't a concern about their heat stability. Also microwave heating is more efficient, so there is a decrease in energy consumption (Column 3, lines 19-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a microwave sensitive binder material and to form the absorbent article with a topsheet and backsheet in the method of Pike et al. as suggested by Alper et al.

Regarding claim 2, Pike et al. (Page 3, lines 52-57) and Alper et al. (Column 8, lines 7-67) teach that the binder material comprises one of a thermosetting material, a thermoplastic material, and combinations thereof.

Regarding claim 3, Pike et al. teaches that the binder material comprises a bicomponent fiber (Page 4, lines 1-12).

Regarding claims 6 and 7, it is known and conventional in the art to have the radiofrequency energy be microwave energy applied within a tunable microwave resonance chamber in TM_{010} or TM_{020} mode. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a microwave chamber in TM_{010} or TM_{020} mode in the method of Pike et al. as modified above.

Regarding claim 9, one skilled in the art would have readily appreciated adding moisture to the absorbent web prior to the application of the radiofrequency energy, since it would help the absorption of the microwaves by the absorbent web. It would have been obvious to one of ordinary skill in the art at the time the invention was made to add moisture prior to applying the radiofrequency energy in the method of Pike et al. as modified above, since it is conventional to do so.

Regarding claim 10, one skilled in the art would have readily appreciated the maximum temperature of the absorbent web not exceeding 140°C during activation of the binder, so that the binder and fibers don't burn and so that all the fibers don't melt and change the shape and properties of the absorbent web. It would have been obvious to one of ordinary skill in the art at the time the invention was made to not exceed 140°C during activation in the method of Pike et al. as modified above.

Regarding claim 11, Pike et al. and Alper et al. is relied upon for the teachings above. Pike et al. also teaches a method of making a molded absorbent web in an automated machine, the method comprising: providing an absorbent web including

fibers and binder material, conveying the absorbent web into an automated molding device including a molding substrate, heating the binder material in the absorbent web, deforming the absorbent web against the molding substrate to impose a shape to the absorbent web, cooling the binder material, and removing the absorbent web from the molding substrate wherein the shape imposed by the molding substrate is maintained by the binder material (Page 8, line 44 – Page 9, line 39).

Pike et al. is silent toward the fibers being cellulosic fibers and heating the binder material by applying radiofrequency energy.

Alper et al. teaches the fibers being cellulosic fibers and that the binder material is heated by readiofrequency energy (microwaves) (Column 2, lines 29-57).

One skilled in the art would have readily recognized using cellulosic fibers in the absorbent web, since it is known and conventional in the art. One skilled in the art would have also readily appreciated using a binder material that is activated by radiofrequency energy (microwaves), since they can form stronger bonds and a broader range of adhesives can be utilized since there isn't a concern about their heat stability. Also microwave heating is more efficient, so there is a decrease in energy consumption (Column 3, lines 19-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a microwave sensitive binder material and cellulosic fibers to form the absorbent article in the method of Pike et al. as suggested by Alper et al.

Regarding claim 12, Alper et al. teaches that the radiofrequency energy comprises microwaves and the binder material is microwave sensitive (Column 2, lines

29-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use microwaves and microwave sensitive binder material in the method of Pike et al. as suggested by Alper et al.

Regarding claim 13, it is known and conventional in the art to heat the binder material by passing the absorbent web through a microwave resonance chamber. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a microwave chamber in the method of Pike et al. as modified above.

Regarding claims 14 and 15, one skilled in the art would have readily appreciated the absorbent web additionally including a microwave sensitive component selected from a group consisting of water, an ionic aqueous solution, microwave-sensitive polymers, and combinations thereof, since an additional microwave-sensitive component would improve the absorption of the microwaves by the absorbent web to help heat the binder material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an additional microwave-sensitive component in the method of Pike et al. as modified above, since it is conventional.

Regarding claim 16, Pike et al. (Page 3, lines 52-57) and Alper et al. (Column 8, lines 7-67) teach that the binder material (polyamide or polyvinyl methyl based) includes a dielectric loss constant greater than that of cellulose.

Regarding claim 17, Pike et al. teaches that the binder material comprises a bicomponent fiber (Page 4, lines 1-12). Pike et al. is silent towards the binder material also including a microwave-sensitive core component. One skilled in the art would have readily appreciated having a microwave-sensitive core component to better absorb the

microwaves to activate the binder material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a microwave-sensitive component in the method of Pike et al. as modified above.

Regarding claim 18, Pike et al. (Page 3, lines 52-57) and Alper et al. (Column 8, lines 7-67) teach that the binder material comprises one of a thermosetting material, a thermoplastic material, and combinations thereof.

Regarding claim 19, one skilled in the art would have readily appreciated that the step of heating the binder material could occur simultaneously with the step of deforming web, since binder material would be heated while in the mold and therefore would conform to the mold. It would have been obvious to someone of ordinary skill in the art at the time the invention was made to perform the two steps simultaneously in the method of Pike et al., as modified above, since it is a conventional practice in the art.

Regarding claim 20, one skilled in the art would have readily appreciated the molding substrate comprising a microwave-transparent solid material as it is conventional in the art and necessary for the microwaves to be able to pass through the substrate to activate the binder material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a microwave-transparent molding substrate in the method of Pike et al. as modified above.

Regarding claim 21, Pike et al. teaches that heating the binder material prior to deforming the absorbent web (Page 6, lines 14-20).

Regarding claim 22, Pike et al. and Alper et al. are relied upon for their teachings above. Pike et al. also teaches the absorbent webs having diverse, anatomically conforming shapes to improve the comfort, fit, and efficiency (Page 8, lines 20-28). One skilled in the art would have readily appreciated the absorbent web having a central hump so that it would have a conforming shape for better comfort, fit, and efficiency. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a central hump in the method of Pike et al. as modified above.

Regarding claim 23, Pike et al. teaches deforming the absorbent web against a molding surface to impose the absorbent web a three-dimensional shape having an overall surface depth of at least 2 mm (Table 1).

Regarding claim 24, Pike et al. is silent toward cutting the absorbent web before or after deforming the absorbent web to form more than one discrete absorbent web section. One skilled in the art would have readily appreciated cutting the absorbent web in order to continue processing the individual absorbent webs by, for example, placing it between a topsheet and a backsheet, since it is known and conventional to do so in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to cut the absorbent web in the method of Pike et al. as modified above.

6. Claims 4, 5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pike et al. (EP 0665315) in view of Alper et al. (U.S. Patent 6,024,822) as applied

to claims 1-3, 6-7, and 9-24 above, and further in view of Scott, Jr. et al. (U.S. Pub. 2002/0032421).

Regarding claims 4 and 5, Pike et al. and Alper et al. are relied upon for the teachings above. Pike et al. is silent toward the binder material comprising latex and is either non-crosslinking or comprises a crosslinking inhibitor.

Scott, Jr. et al. teaches having a binder material comprising latex and is either non-crosslinking or comprises a crosslinking inhibitor (sodium bicarbonate) (Page 3, paragraphs [0028] and [0030]).

One skilled in the art would have readily appreciated having a binder material comprising latex and is either non-crosslinking or comprises a crosslinking inhibitor since it is conventional in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a binder material comprising latex and is either non-crosslinking or comprises a crosslinking inhibitor in the method of Pike et al., as modified above, as suggested by Scott, Jr. et al.

Regarding claim 8, Pike et al., Alper et al., and Scott, Jr. et al. are relied upon for their teachings above. Pike et al. is silent toward the binder material including a water-soluble, non-colloidal, cationic thermosetting material. Scott, Jr. et al. teaches having a water soluble binder that can be used for flushability (Page 3, paragraph [0028]). One skilled in the art would have readily appreciated the binder including a water-soluble, non-colloidal, cationic thermosetting material since it is conventional and the art and water-soluble binders can be used for flushability. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a the binder that

includes a water-soluble, non-colloidal, cationic thermosetting material in the method of Pike et al., as modified above, as suggested by Scott Jr. et al.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayme L. Brown whose telephone number is 571-272-8386. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jayme L. Brown

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JOHN T. HARAN
PRIMARY EXAMINER